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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/511,925 | 10/18/2004 | Eng Shi Ong | 984-PCT-US | 7210 |
| 7590 04/19/2006 | | | EXAMINER | |
| Law Offices of Albert Wai Kit Chan | | | MOSS, KERI A | |
| World Plaza Suite 604 | | | ART UNIT | |
| 141 07 20th Avenue | | | PAPER NUMBER | |
| Whitestone, NY 11357 | | | 1743 | |

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/511,925

Applicant(s)

ONG, ENG SHI

Examiner

Keri A. Moss

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/18/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what is meant by the term "dynamically." How does that term limit the invention and differentiate the invention from another that contacts an analyte with water at a regulated pressure?

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-9, 11, 13 and 15-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Wai (USP 6,524,628). Wai discloses a method for water mediated extraction of analytes from a sample comprising contacting an analyte-containing

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sample with water below 100 degrees Celsius (abstract) and at a regulated pressure from about 25 to 100 bar (abstract). The water may contain an organic solvent such as ethanol (paragraph bridging columns 8 and 9). Sand may be used as a dispersant (paragraph bridging columns 1 and 2). The contacting occurs for approximately 15 minutes (column 8 lines 51-65). The analytes may be detected using gas chromatography (column 9 lines 49-56). The flow rate of contact is about 1 mL/min (column 10 lines 10-15).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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7. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wai. Wai does not disclose contacting between 20 and 40 minutes nor does Wai disclose a specific concentration of ethanol in the ethanol/water mixture. Both the time for contact and the concentration of ethanol are result-effective variables. A result-effective variable is one that has well-known and expected results. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) teaches that optimization of a result-effective variable is ordinarily within the skill of one in the art. Varying the amount of time of contact or the concentration of alcohol has the well-known and expected result of a more effective extraction for the particular analyte. Therefore, it would have been obvious to one of ordinary skill in the art to meet the time and concentration requirements of claimed 20 to 40 minutes of contact or 5-30% ethanol mixture by modifying Wai and selecting the size and concentration in order to find the most effective extraction.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wai in view of Hartung (USP 4,176,228). Wai does not specifically disclose analytes of berberine, baicalein, or glycyrrhizin. Hartung discloses a method for extracting glycyrrhizin with water at high temperature and pressure (column 3 lines 28-43) from a plant root. It would have been obvious to combine the Wai method of extracting a botanical sample with Hartung's teaching of extracting glycyrrhizin, as the substance has already been proven capable of extraction with water, Wai has demonstrated

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effective extraction from plants and specifically roots of plants and also to broaden the utility of Wai's method.

9. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wai in view of McMurtrey (USP 6,511,601). Wai does not disclose water containing a surfactant or detergent. Surfactants are well known by those working in the art to precipitate out proteins. Surfactants are also commonly used in extractions. McMurtrey discloses a method of extraction including contacting the analyte with a surfactant and water (abstract). McMurtrey teaches that surfactants precipitate proteins (column 8 line 27-43). It would have been obvious to one of ordinary skill in the art to modify Wai by adding surfactant to the contacting fluid in order to precipitate out any proteins during the extraction process.

While McMurtrey nor Wai disclose the specific surfactants sodium dodecyl sulfate or Triton X-100, the surfactants are result effective variables. It would have been obvious to meet the precipitation requirements of an extraction of an analyte with a surfactant such as sodium dodecyl sulfate or Triton X-100. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keri A. Moss whose telephone number is 571-272-8267. The examiner can normally be reached on 9-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)272-1700. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

4/17/06


Jill Warden
Supervisory Patent Examiner
Technology Center 1700